



Progress in Longevity Medicine Seminar Series

**The Endeavor of High Maintenance Homeostasis: Resting
Metabolic Rate and Legacy of Longevity**

Luigi Ferrucci, MD, PhD

Director, Baltimore Longitudinal Study of Aging

Senior Investigator, Clinical Research Branch

National Institute on Aging, National Institutes of Health

Date/Time: Friday, March 10, 2006; 6:00 pm (dinner included)

Location: The Arizona Club, 201 N. Central Ave., 37th Floor

Cost: Free

Abstract: Metabolism, the continuous conversion between structural molecules and energy, is life in essence. Size, metabolic rate, and maximum life span appear to be inextricably interconnected in all biological organisms and almost following a "universal" law. The notion of metabolic rate as the natural "rate of living" filled most of the academic discussion on aging in the early twentieth century to be later substituted by the free-radical theory of aging.

We argue that the rate of living theory was discarded too quickly and that studying factors affecting resting metabolic rate (RMR) over the aging process may provide great insight into the core mechanisms explaining differential longevity between individuals, and possibly the process leading to frailty. We predict that measures of RMR will be introduced in geriatric clinical practice to gather information on the degree of multi-system dysregulation, exhaustion of energy reserve, and risk of irreversible frailty.

Objectives:

- To explore the energetic pathway to frailty
- To understand the relationship between longevity and resting metabolic rate (RMR)
- To propose a model for studying the metabolic cost of walking

Biography: Dr. Luigi Ferrucci, a geriatrician and epidemiologist, is the Director of the Baltimore Longitudinal Study of Aging, and a Senior Investigator at the Clinical Research Branch of the National Institute on Aging, National Institutes of Health. Dr. Ferrucci has made major contributions in the design of many epidemiological studies conducted in the U.S. and in Europe, including the European Longitudinal Study on Aging, the "ICare Dicomano Study," the AKEA study of Centenarians in Sardinia, and the Women's Health and Aging Study. His research interests involve frailty and mobility disability in the elderly.

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He was previously a member of the Department of Geriatric Medicine of the National Institute for Research and Care of the Elderly (INRCA) in Florence, Italy. Dr. Ferrucci was also a visiting scientist at the National Institute on Aging (NIA), where he worked as a researcher for the Established Populations for Epidemiological Studies of the Elderly and a Co-Investigator for the Women's Health and Aging Study. He has been newly appointed to the position of Editor-in-Chief of the *Journal of Gerontology: Medical Sciences*.

Dr. Ferrucci received his medical degree at the University of Florence, where he also earned his doctorate of philosophy degree in Biology and Pathophysiology of Aging. He completed his internship in the intensive care unit of the Institute of Gerontology and Geriatrics of the University of Florence and became a fellow at INRCA. Dr. Ferrucci was Assistant Director and Coordinator of the Laboratory of Clinical Epidemiology at the INRCA's Geriatric Department.

Dr. Ferrucci has written or co-authored more than 250 articles and more than 30 book chapters, and is co-editor of two books.

To RSVP or for additional information, please contact Diana Vuong at (602) 778-7492 or via email, Diana.Vuong@kronosinstitute.org.

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